

---

## **Documentation, Codebook, and Frequencies**

### **Surplus Sera Laboratory Component:**

Antibody to human herpes virus 8

(NHANES III Surplus Sera)

**Survey Years:**

**1988 to 1994**

**SAS Export File:**

**SPSHV8.XPT**



**First Published: May 2006**

**Last Revised: N/A**

## NHANES III Data Documentation

### Laboratory Assessment: Antibody to human herpes virus 8 (NHANES III Surplus Sera)

Years of Coverage: 1988–1994

First Published: May 2006

Last Revised: N/A

---

<b>Component Description</b>	Human herpesvirus 8 (HHV8) antibody testing of stored sera specimens from NHANES III (1988–1994) was conducted to estimate the seroprevalence of HHV8. HHV8 is also known as Kaposi sarcoma associated herpesvirus.
<b>Eligible Sample</b>	Participants aged 6+ years from of NHANES III with stored sera (N = 18,168).
<b>Description of Laboratory Methodology</b>	<p>HHV8 antibody testing was performed using enzyme-linked immunosorbent assays (ELISAs) to detect IgG antibodies to the HHV8 K8.1 structural glycoprotein (expressed during lytic viral replication) and orf73 (also known as LANA, a viral regulatory protein expressed during latent infection). Sera were diluted 1:20 for the K8.1 ELISA and 1:100 for the orf73 ELISA. ELISA methods have been published (1).</p> <p>HHV8 testing was conducted over a period of 6 months. To adjust for plate-to-plate variability in ELISA performance, optical density (OD) values were standardized to the mean OD of the positive controls, which were kept the same on each plate. This adjustment was done by regressing the OD value of each sample against the mean OD of the positive controls on that plate. For each assay, most subjects had residuals derived from these regression models that were largely clustered in a single peak indicating low antibody reactivity, but there were a minority of individuals who had higher reactivity. A cutoff was selected for each assay to divide these two groups, with subjects whose values were above the cutoff classified as seropositive.</p> <p>Both K8.1 and orf73 antibodies were measured because some infected individuals, including those with Kaposi sarcoma, make antibodies only to lytic or latent antigens (2). The K8.1 ELISA is estimated to have 91-100% sensitivity and 92-100% specificity (1;3). Sensitivity and specificity of the orf73 ELISA have not been established, although the widely used indirect immunofluorescence assay for LANA antibodies has reasonable but perhaps more variable sensitivity (80-100%) and specificity (57-100%) (1;3).</p>

**Laboratory  
Quality  
Control and  
Monitoring**

Sera were run concomitantly with known positive and negative controls. Plates with anomalous values for these controls were re-run.

**Data  
Processing  
and Editing**

Data Access: All data are publicly available.

**Analytic  
Notes**

There are two variables for human herpesvirus 8 antibody measurements:

K8POS: result on K8.1 ELISA (1=positive, 2=negative)

ORFPOS: result on orf73 ELISA (1=positive, 2=negative)

[Check variable names, coding of positive and negative]

**References**

- (1) Engels EA, Whitby D, Goebel PB, Stossel A, Waters D, Pintus A, Contu L, Biggar RJ, Goedert JJ. Identifying human herpesvirus 8 infection: performance characteristics of serological assays. *J Acquir Immune Defic Syndr* 2000;23:346-54.
- (2) Biggar RJ, Engels EA, Whitby D, Kedes DH, Goedert JJ. Antibody reactivity to latent and lytic antigens to human herpesvirus-8 in longitudinally followed homosexual men. *J Infect Dis* 2003; 187:12-8.
- (3) Engels EA, Sinclair MD, Biggar RJ, Whitby D, Ebbesen P, Goedert JJ, Gastwirth JL. Latent class analysis of human herpesvirus 8 assay performance and infection prevalence in sub-Saharan Africa and Malta. *Int J Cancer* 2000;88:1003-8.

## Locator Fields

**Title:** Antibody to human herpes virus 8 (NHANES III Surplus Sera)

**Contact Number:** 1-866-441-NCHS

**Years of Content:** 1988-1994

**First Published:** May 2006

**Revised:** N/A

**Access Constraints:** None

**Use Constraints:** None

**Geographic Coverage:** National

**Subject:** Antibody to human herpes virus 8 (HHV8)

**Record Source:** NHANES III

**Survey Methodology:** NHANES III is a stratified multistage probability sample of the civilian non-institutionalized population of the U.S.

**Medium:** NHANES Web site; SAS transport files

**National Health and Nutrition Examination Survey  
Codebook for Data Production (1988-1994)  
(NHANES III)**

**Antibody to human herpes virus 8 (SPSHV8)  
Person Level Data**

First Release: May 2006

Last revised: N/A



SEQN	Target
	B(6 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Respondent sequence number
English Text: Respondent sequence number.	
English Instructions:	

H8PK	Target			
	B(6 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	K8.1 assay result, positive vs. negative			
English Text: K8.1 assay result, positive vs. negative				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Positive	355	355	
2	Negative	17813	18168	
.	Missing	0	18168	

H8PORF	Target			
	B(6 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	orf73 assay, positive vs. negative			
English Text: orf73 assay, positive vs. negative				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Positive	261	261	
2	Negative	17907	18168	
.	Missing	0	18168	